



UNM LEARN



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[Course Home](#) **Take Test: Midterm**

# Take Test: Midterm

## Test Information

### Description

### Instructions

**Timed Test** This test has a time limit of 3 hours. This test will save and submit automatically when the time expires.  
Warnings appear when **half the time, 5 minutes, 1 minute, and 30 seconds** remain.

**Multiple Attempts** Not allowed. This test can only be taken once.

**Force Completion** This test can be saved and resumed at any point until time has expired. The timer will continue to run if you leave the test.

## QUESTION 1

**3.125 points****Saved**

Which of the following is a common type of NoSQL

- ☐ Key-Value stores
- ☐ Document Databases
- ☐ Wide-Column Databases
- ☐ Graph Database
- ☒ All the above

## QUESTION 2

**3.125 points****Saved**

What is a benefit of Cloud computing for IT staff?

- ☐ Higher payment for IT involved in cloud computing
- ☐ Less disruption of work by users asking for support
- ☐ Less knowledge needed: Cloud computing does not require specialized skills
- ☒ Less stress levels: less worry about normal daily activities like making back-ups
- ☐ IT staff do not care about the Cloud

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**QUESTION 3****3.125 points****Saved**

What are the different types of Cloud Service Models?

- ☐ DBaaS, IaaS, PaaS, KaaS
- ☐ FaaS, NaaS, LaaS
- ☒ IaaS, PaaS, SaaS
- ☐ None of the above

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**QUESTION 4****3.125 points****Saved**

Which of the following best describes a phantom deadlock?

- ☐ "a is waiting for b" and "b is waiting for c", but in fact, by the time we checked "a", "b" was no longer waiting
- ☐ "a is waiting for b" and "b is waiting for c", but in fact, by the time we checked "a", "c" was no longer waiting
- ☒ "a is waiting for b" and "b is waiting for c", but in fact, by the time we checked "b", "a" was no longer waiting

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**QUESTION 5****3.125 points****Saved**

What type of service is OpenStack Cinder?

- ☐ Object Storage
- ☒ Block Storage
- ☐ Compute
- ☐ Serverless
- ☐ None of the above

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**QUESTION 6****3.125 points****Saved**

What are the benefits of Load Balancing:

- ☒ User experience faster, uninterrupted services. Users will not have to wait for a single struggling server to finish its previous tasks. Instead, the requests are immediately pass on to a more readily available resource

- ☐ User experience faster but interrupted services. Users will not have to wait for a single struggling server by shutting down the problematic server.
- ☐ Users experience higher downtime and lower throughput.

**QUESTION 7****3.125 points****Saved**

How does Cloud computing change the relationship between providers and customer?

- ☒ Increased focus on SLAs
- ☐ Less compliance to standards
- ☐ Less focus on SLAs
- ☐ More focus on training
- ☐ Allowed hackers to steal photos from a Cloud storage provider

**QUESTION 8****3.125 points****Saved**

Which of the following Amazon Web Services is equivalent in functionality with OpenStack Swift?

- ☐ EC2
- ☐ EBS
- ☒ S3
- ☐ ELB
- ☐ None of the above

**QUESTION 9****3.125 points****Saved**

What is an important benefit of the Cloud

- ☐ Highly protected data
- ☐ Independency from the Internet
- ☒ Reduced cost
- ☐ ) Small bandwidth

**QUESTION 10****3.125 points****Saved**

Based on the CAP theorem, MongoDB distributed data store system is ?

- ☐ AC
- ☒ CP
- ☐ AP

**QUESTION 11****3.125 points****Saved**

What does a Load Balancer do?

- ☐ It helps replicate the data across one or more data systems
- ☒ It helps to spread the traffic across a cluster of services to improve responsiveness and availability of applications, websites and database.
- ☐ It helps with reducing the critical path delay by caching data in the outer part of the cloud

**Remaining Time: 2 hours, 24 minutes, 37 seconds.**

▼ **Question Completion Status:**

- ☐ committed/aborted

**QUESTION 13****3.125 points****Saved**

What is scalability?

- ☒ Scalability is the capability of a system, process, or a network to grow and manage increased demand. Any distributed system that can continuously evolve in order to support the growing amount of work is considered to be scalable.
- ☐ Scalability is the probability a system may fail in a given period.
- ☐ Scalability is the amount of time a system remains operational to perform its required function.

**QUESTION 14****3.125 points****Saved**

The CAP theorem states that in a distributed system you can have

- ☐ Consistency
- ☐ Availability
- ☐ Partition Tolerance
- ☒ Only two of the above
- ☐ All of the above

**QUESTION 15****3.125 points****Saved**

There are many different schemes one could use to decide how to break up a database into multiple smaller databases. Which of the following is a scheme of partitioning data:

- ☐ Horizontal partitioning

- ☐ Vertical partitioning
- ☐ Directory based partitioning
- ☒ All the above

**QUESTION 16****3.125 points****Saved**

*Click Save and Submit to save and submit. Click Save All Answers to save all answers.*

- ☐ Storage in the cloud has shorter access time than storage in the local area network
- ☐ Storage in the cloud is easier to protect against intrusion.
- ☐ There is no benefit. Cloud is a crap.

**QUESTION 17****3.125 points****Saved**

What does Partition tolerance mean in the context of the CAP theorem

- ☐ All nodes see the same data at the same time
- ☐ Every request gets a response on success/failure
- ☒ The system continues to work despite message loss or partial failure

**QUESTION 18****3.125 points****Saved**

Which of following is not correct for vector clocks?

- ☐  $[3,4564] < [4564, 4564]$
- ☐  $[2,45]$
- ☒  $[1,4564] < [4564,1]$

**QUESTION 19****3.125 points****Saved**

The vast majority of relational database are ACID (Atomicity, Consistency, Isolation and Durability) compliant.

- ☒ True
- ☐ False

**QUESTION 20****3.125 points****Saved**

Is the following correct around schemas: In SQL stores, each records conforms to a fixed schema, meaning a the columns must be decided and chosen before data entry and each row must have data for each column. The schema can be altered later, but involves modifying the whole database and

potentially down time

- ☒ True  
☐ False

**QUESTION 21****3.125 points****Saved**

What is the correct definition of Cloud Computing

- ☒ A large pool of usable and accessible virtualized resources  
☐ A network of globally interconnected client computers  
☐ A service architecture based on thin clients  
☐ A service offer by a service provider, not limited by a Service Level Agreement (SLA)

**QUESTION 22****3.125 points****Saved**

Which one of the following is correct:

- ☐ If a system is available then it is reliable  
☒ If a system is reliable then it is available

**QUESTION 23****3.125 points****Saved**

If the number of partitions is larger than the number of consumers in Kafka  
then

- ☒ Consumers will receive messages from multiple partitions  
☐ Some consumers may be idle because they will have no partitions to read from  
☐ Each partition will read in order from exactly one partition  
☐ None of the above

**QUESTION 24****3.125 points****Saved**

Which of following is correct for logical clocks?

- ☐ If 3 happens before 1,  $3 \rightarrow 1$ , then  $LT(3)$   
☒ If 1 happens before 3,  $1 \rightarrow 3$ , then  $LT(3)$   
☐ If  $LT(3) < 1$   
☐ If  $LT(1) < 3$

**QUESTION 25****3.125 points****Saved**

Which of the following could be a potential problem with data partitioning:

- ☐ Performing joins on database which is running on one server
- ☒ Performing joins on database which is running on multiple servers

### QUESTION 26

3.125 points

Saved

Early detection of faults can decrease or avoid system downtime

- ☒ True
- ☐ False

### QUESTION 27

3.125 points

Saved

What can be done to make maximum use of the interoperability principle of Cloud computing?

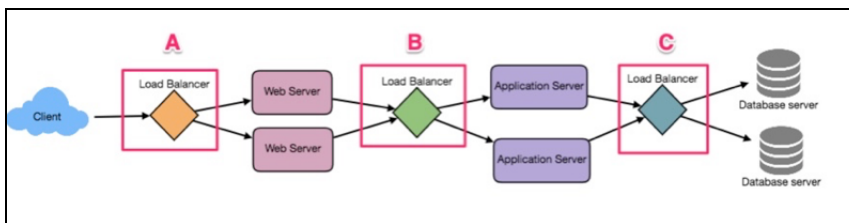
- ☐ Employ multiple system integrators to build your private cloud
- ☐ Only use cloud providers in the US
- ☐ Use hardware and software from a single vendor
- ☒ Use standard protocols

### QUESTION 28

3.125 points

Saved

In the picture below we showcase where a Load Balancer can be placed in order to utilize full scalability and redundancy. Which of the following load balancers are redundant



- ☐ Between the user and the web server;
- ☐ Between web servers and an internal platform layer, like application servers or cache servers;
- ☐ Between internal platform layer and database;
- ☒ All A, B and C LB are needed to balance the load at each layer of the system.

### QUESTION 29

3.125 points

Saved

How did virtualization helped with the proliferation of Cloud Computing

- ☐ A virtual machine is more secure than a physical machine
- ☒ Virtualization made it easier to share resource between users
- ☐ Virtual machines have greater performance than their physical counterparts
- ☐ Virtualization lead to better network utilization

**QUESTION 30****3.125 points****Saved**

The critical path is the set of actions that contribute to the delay observed by an end-user after they requested a reply from the cloud

- ☒ True
- ☐ False

**QUESTION 31****3.125 points****Saved**

What is not a valid reason for the customer asking a Cloud provider where their servers are located?

- ☐ Geographical location may tell something about network latency
- ☐ Geographical location may tell something about legislation
- ☐ The number of sites tells you something about disaster recovery possibilities
- ☒ When a server breaks down, the customer wants to send a technician to fix the problem as soon as possible

**QUESTION 32****3.125 points****Saved**

Which service model allows the customer to choose more layers in the computing architecture

- ☒ Infrastructure as a Service (IaaS)
- ☐ Platform as a Service (PaaS)
- ☐ Software as a Service (SaaS)
- ☐ There is no difference between the service models.